DOCUMENT RESUME

ED 199 636 CS 005 918

AUTHOR Whaley, Jill Fitzgerald
TITLE Readers' Reactions to Temporal Disruption in Stories.
PUB DATE Dec 80
NOTE 11p.; Paper presented at the Annual Meeting of the National Reading Conference (30th, San Diego, CA, December 3-6, 1980).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Developmental Stages; Discourse Analysis; Elementary Secondary Education; *Expectation; Grade 3; Grade 6; Grade 11; *Reading Research; Reading Skills; *Structural Analysis (Linguistics); *Student Reaction
IDENTIFIERS *Disruptive Effect (Reading); *Story Grammar

ABSTRACT

A study was conducted to determine whether (1) readers would express an awareness of structural disruption in stories, (2) there were developmental differences in the extent to which readers were aware of structural disruption, and (3) there were developmental differences in the types of structural disruptions that disturbed readers. Fifty third grade, 51 sixth grade, and 52 eleventh grade students participated in two tasks, which involved the manipulation of story parts: setting, beginning, complex reaction, attempt, outcome, and ending. The students read two stories silently and were instructed to tell the examiner if they encountered something wrong with the way a story was put together. The results indicated that the readers did not always express awareness of structural disruption, suggesting that they did not always expect each of the story parts to be present or in a specific place. In addition, older children were more aware of temporal and structural disruption than were younger children, and there were no developmental differences in children's awareness of various types of structural variations. (FL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED199636

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☒ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

Jill Fitzgerald Whaley
Assistant Professor
Reading and Language Arts
University of North Carolina at Chapel Hill
307 Peabody Hall - UNC
Chapel Hill, North Carolina 27514

"PERMISSION TO REPRODUCE THIS
MATERIAL HAS BEEN GRANTED BY

Jill Fitzgerald Whaley

TO THE EDUCATIONAL RESOURCES
INFORMATION CENTER (ERIC)."

Readers' Reactions to Temporal Disruption in Stories

Jill Fitzgerald Whaley

University of North Carolina at Chapel Hill

CS005918

Readers' Reactions to Temporal Disruption in Stories

Recent research has explored the question of whether individuals have a concept of idealized story structure; i.e., whether readers and listeners have a mental representation of story elements, such as beginning, development of action, and ending, and of how these elements fit together (e.g., Mandler & Johnson, 1977; Rumelhart, 1978; Stein & Glenn, in press; Thorndyke, 1977). Findings from investigations based predominantly (though not entirely) on recall tasks have been very consistent in demonstrating that 1) individuals do appear to have an idealized concept of story, 2) individuals' knowledge of story structure develops over time, and 3) readers and listeners appear to use this knowledge about story parts to understand and remember stories (cf., Mandler, 1978; Mandler & Johnson, 1977; Mosenthal, 1978; Rumelhart, 1978; Stein, 1976, in press; Stein & Glenn, in press; Thorndyke, 1977; Whaley, 1979). However, there has been occasional contradictory evidence. At least two studies, by Baker (1978) and by Stein and Nezworski (in press), indicate that different research tasks may vary in the extent to which they reveal individuals' knowledge of story structure.

The purpose of the present study was to further explore individuals' concept of story structure, but to do so from yet another perspective, i.e., using procedures other than recall tasks. The rationale for design of the tasks was that if readers expect a particular ideal structure to

occur in narrative materials, then when they are reading, they ought to be aware of temporal and structural disruption in stories, i.e., they should be startled by violations of those expectations. Also, more extreme violations should be more noticeable. Thus, two tasks were designed so that subjects read stories in which story parts had been moved around or deleted, and then the subjects indicated orally if something about the story structure disturbed them. These tasks are similar to ones used by Stein (1976) and Stein and Glenn (1977) except Stein and Glenn asked subjects to listen to stories having violations and then recall the stories. Their focus was on the effect of the violations on recall. In the present study, the focus was on readers' expression of their awareness of disruptions in stories.

Three main questions were addressed in the present investigation: 1) Do readers express an awareness of structural disruption in stories? 2) Are there developmental differences in the extent to which readers are aware of structural disruption? and 3) Are there developmental differences in the types of structural disruption that disturb readers?

Method

Subjects

Fifty third graders, 51 sixth graders, and 52 eleventh graders completed Task I. The same sixth and eleventh graders participated in Task II. Only students reading at or above grade level were selected for the study. This was done at the lower grade levels to control for possible word recognition difficulties and to insure at least literal level comprehension. Then, in order to make comparisons across grades, it seemed reasonable to maintain consistent rules for reading ability at each grade level. Reading level was determined using teacher judgement and a previously administered standardized test. Different tests

were used at different grade levels (Gates-MacGinitie Reading Tests, Gates & MacGinitie, 1965; Iowa Test of Basic Skills, Lindquist et al., 1955-56; Tests of Academic Progress, Scannell & Smith, 1964-66).

Materials

The Task I story was a variant of "Fox and Bear" (cf., Stein and Glenn, in press); the Task II story was a modified version of "Harry by the Sea" (Zion, 1965). Using the Spache (1974) formula, readability levels of the two stories were 2.6 and 2.5, respectively. The Mandler and Johnson (1977) story grammar was used to identify basic story parts in each story: Setting, Beginning (a precipitating event), Complex Reaction (the protagonist's reactions to the precipitating event and establishment of a goal, Attempt (the attempt to achieve the goal), Outcome (the success or failure of the attempt), and Ending. For identification of these parts in the stories, the interrater reliability was .89.

Procedures

In Task I, the Reaction and the Outcome were systematically moved forward or backward in the story. These two categories were selected because in prior research the Reaction category was consistently least often recalled and the Outcome was one category most frequently recalled. Thus, when moved, these two categories might represent ones that could be less noticeable and more noticeable, respectively. Subjects were randomly assinged to one of nine conditions: 1) the Reaction was moved toward the start of the story by one category so that it preceded the Beginning; 2) the Reaction was moved toward the start of the story by two categories; 3) the Reaction was moved toward the end of the story by one category so that it followed the Attempt; 4) the Reaction was moved two categories toward the end; 5) the Outcome was moved one category toward the start; 6) the Outcome was moved two categories toward the

start; 7) the Outcome was moved one category toward the end; 8) the story parts were scrambled in random order; and 9) the story was presented intact (control condition).

In Task II, subjects were randomly assigned to one of seven conditions. In conditions one through six, the six story categories (Setting, Beginning, Reaction, Attempt, Outcome or Ending) were systematically deleted, one for each condition. Condition seven was a control situation in which the entire story was read. No spaces or blank lines were inserted in the material that the students read.

Students read the stories individually. They were told to read each story silently, and if they encountered something wrong with the way the story was put together, they were to tell the examiner about it. They were told that one or more sentences might have been moved around in the story or that one or more sentences might have been removed. They were also warned that the material may not have been tampered with. After completing the tasks, subjects were asked if they had heard either of the stories before. None of the students indicated they had heard them.

Analysis

To analyze subjects' responses, a score of two was given when the child indicated something was wrong with the structure of the story. The child had to at least identify the appropriate place of the category shift or deletion. In Task II, the subject did not have to supply the missing information. A score of one meant the student thought the structure of the story was acceptable. Interrater reliability for scoring protocols was .95 for Task I and .94 for Task II.

Two separate sets of two-way (grades by conditions) univariate analyses of variance were performed, one for each task.

Results

To determine whether the readers expressed an awareness of the structural changes made in the stories, the main effects for conditions were ascertained for each task. In Task I, there was a significant main effect for conditions ($F = 7.76$; $p < .0001$). The means for conditions one through nine were 1.63, 1.89, 1.30, 1.22, 1.22, 1.43, 1.33, 1.73, and 1.07, respectively. However, planned contrasts comparing each condition to the control group indicated that readers were not disturbed by many of the category displacements. Specifically, only conditions one, two, six, and eight were significantly different from the control condition. The t statistics and probability levels for these planned contrasts were: 4.01, $p < .01$; 5.83, $p < .01$; 2.44, $p < .05$; 4.59, $p < .01$; respectively. In other words, movement of the Reaction category one and two nodes towards the start of the story and movement of the Outcome two nodes towards the start of the story were noticed. Also, nearly all students were aware of severe disruption in the scrambled story. In most cases, then, moving a category toward the start of the story was noticeable; moving it towards the end wasn't noticeable. Also, increasing the distance of category displacement significantly affected readers' awareness in only one instance. Moving the Reaction toward the start of the story by two categories was significantly more noticeable than moving it one category toward the start ($t = 2.00$, $p < .05$).

In Task II, there was also a significant main effect for conditions ($F = 9.06$, $p < .0001$). The means for conditions one through seven, respectively, were 1.37, 1.82, 1.07, 1.13, 1.15, 1.00, and 1.34. Tests of planned contrasts showed only the responses in condition two (where the Beginning was deleted) were significantly different from those in the control situation ($t = 4.80$, $p < .01$). In other words, on the average, except for the case of the deleted Beginning, readers were not

cognizant of category deletions. This is not surprising in the case of the Reaction deletion because explicit statements of Reactions are considered optional in Mandler and Johnson's (1977) grammar. The result is surprising in the other cases.

To determine whether there were developmental differences in the extent to which readers were aware of structural disruption, the main effects for grades were ascertained for each task. In both tasks there were significant main effects for grades (Task I, $F = 16.77$, $p < .0001$; Task II, $F = 8.14$, $p < .0055$). In Task I, eleventh graders noticed the category shifts significantly more often than third graders ($t = -5.18$, $p < .001$), and sixth graders were significantly more aware of the shifts than were third graders ($t = -4.20$, $p < .001$). There was no difference between sixth and eleventh graders ($t = .97$, $p > .05$). In Task II, eleventh graders noticed category deletions significantly more often than did the sixth graders ($t = -3.13$, $p < .01$). In general then, for both tasks, older students were more aware of temporal disruption than were younger students.

Finally, the interactions of grades by conditions were analyzed to determine if there were developmental differences in the types of structural disruptions that might disturb readers. The interactions were not significant in either task (Task I, $F = 1.25$, $p < .2431$; Task II, $F = .65$, $p < .6928$).

Conclusions and Discussion

The main conclusions drawn from the results of the two tasks used in this study were: 1) the readers did not always express awareness of structural disruption, so it appeared that they did not always expect each of the story categories to be present and they did not consistently

expect Reaction and Outcome categories to appear in specific places; 2) older children were more aware of temporal and structural disruption than were younger children; and 3) there were no developmental differences in children's awareness of various types of structural variations.

The strength of the interpretation of the findings is tempered by the fact that only one story was used in each task. It is possible that the results may be story specific. Also, only two categories were manipulated in Task I. However, across the two tasks, the results do tend to point to the same conclusions.

With these comments in mind, there are two main points that might be discussed. First, because the results are somewhat at odds with previous research, these findings may indicate a "task effect;" these tasks may not be good measures of readers' knowledge of story structures or they may tap a true, but separate dimension of story structure knowledge.

Secondly, the results might be compared to the two previous studies by Stein (1976) and Stein and Glenn (1977) in which categories were moved or deleted and the effect on recall was analyzed. The conditions under which accuracy of recall was affected in Stein (1976) and Stein and Glenn's (1977) studies do not correspond exactly to the conditions in the present study under which children were aware of structural variation. To give one example, movement of the Reaction category so that it preceded the Beginning was noticed in the present study, but under the same category movement in Stein's (1976) study, accuracy of recall was not decreased. Taken together, one interpretation of the results of these three studies is that metacognition regarding story structures may be unrelated to comprehension and accurate recall. This is an issue that specifically deserves to be addressed in further studies.

References

Baker, L. Processing temporal relationships in simple stories: Effects of input sequences. Journal of Verbal Learning and Verbal Behavior, 1978, 17, 559-572.

Gates, A. I., & MacGinitie, W. H. Gates-MacGinitie Reading Tests, N. Y.: Teachers College Press, 1965.

Lindquist, E. F., & Hieronymus, A. N. Iowa Test of Basic Skills. Boston: Houghton Mifflin, 1955-56.

Mandler, J. M. A code in the node: The use of a story schema in retrieval. Discourse Processes, 1978, 1, 14-35.

Mandler, J. M., & Johnson, N. S. Remembrance of things parsed: Story structure and recall. Cognitive Psychology, 1977, 9, 111-151.

Mosenthal, P. Fourth graders' comprehension of story structures under three recall conditions. In P. D. Pearson, and J. Hansen (Eds.), Reading: Disciplined inquiry in process and practice, 27th Yearbook of the National Reading Conference, 1978.

Rumelhart, D. E. Understanding and summarizing brief stories. In D. LaBerge and J. Samuels (Eds.), Basic procedures in reading: Perception and comprehension. Hillsdale, N. J.: Lawrence Erlbaum, 1978.

Scannell, D. P. & Smith, H. P. Tests of Academic Progress. Boston: Houghton Mifflin, 1964-66.

Spache, G. Good reading for poor readers. Champaign, Ill.: Garrard, 1974.

Stein, N. L. How children understand stories: A developmental analysis. In L. Katz (Ed.), Current topics in early childhood education (Vol. 2). Hillsdale, N. J.: Ablex, in press.

Stein, N. L. The effects of increasing temporal disorganization on children's recall of stories. Paper presented at the Psychonomic Society Meetings, St. Louis, 1976.

Stein, N. L., & Glenn, C. G. An analysis of story comprehension in elementary school children. In R. O. Freedle (Ed.), Discourse processing: Multidisciplinary perspectives. Hillsdale, N. J.: Ablex, in press.

Stein, N. L., & Glenn, C. G. The role of structural variation in children's recall of simple stories. Paper presented at the Society for Research in Child Development, New Orleans, 1977.

Stein, N. L., & Nezworski, G. The effects of organization and instructional set on story memory. Discourse Processes, in press.

Thorndyke, P. Cognitive structures in comprehension and memory of narrative discourse. Cognitive Psychology, 1977, 9, 97-110.

Whaley, W. J. An analysis of readers' expectations for story structures. Doctoral dissertation, State University of New York at Buffalo, 1979.

Zion, G. Harry by the sea. N. Y.: Harper & Row, 1965.